

WHAT IS CLAIMED:

- 1 1. A digital camera system, comprising:
2 a digital camera having an image-receiving lens and an image sensor, the image
3 sensor designed to detect an image from the lens; and
4 a sealed case surrounding the digital camera, the case constructed and arranged for
5 providing a water resistant enclosure for the camera and adapted for transmission of the
6 image from the image sensor to a display located external to the case without opening the
7 case.
- 1 2. The camera system as recited in claim 1 wherein the case is formed from two sections
2 of material permanently bonded together.
- 1 3. The camera system as recited in claim 1 wherein the case is waterproof at depths less
2 than about six meters.
- 1 4. The camera system as recited in claim 1 wherein the case is pressure resistant at
2 depths up to about 60 meters.
- 1 5. The camera system as recited in claim 4 wherein the case is made from a
2 polycarbonate resin material, further wherein areas of the case are reinforced.
- 1 6. The camera system as recited in claim 1 wherein the case is pressure resistant at
2 depths up to about 90 meters.
- 1 7. The camera system as recited in claim 6 wherein the case made from an aluminum
2 alloy.
- 1 8. The camera system as recited in claim 1 wherein non-optical internal airspace within
2 the case is filled with a solid or liquid material.

1 9. The camera system as recited in claim 8 wherein internal airspace between the lens
2 and an image sensor is filled with an optically-neutral material.

1 10. The camera system as recited in claim 1 further comprising:
2 a battery system;
3 a storage system powered by the battery system;
4 a user interface in communication with the storage system and battery system;
5 an internal display in communication with the user interface; and
6 an image transmitting apparatus for outputting an image from the camera to a
7 controller external to the case.

1 11. The camera system as recited in claim 10 wherein the means for outputting the image
2 comprises a wired or wireless transmission link.

1 12. The camera system as recited in claim 11 wherein the wireless link is an infrared link
2 or radio frequency link.

1 13. The camera system as recited in claim 10 wherein the storage system is a high-
2 capacity integrated storage system.

1 14. The camera system as recited in claim 13 wherein the storage system is rechargeable
2 with an inductive charging mechanism.

1 15. The camera system as recited in claim 10 wherein the storage system is
2 interchangeable.

1 16. The camera system as recited in claim 10 wherein the battery system is a high-
2 capacity integrated battery system.

1 17. The camera system as recited in claim 16 wherein the battery system is rechargeable
2 with an inductive charging mechanism.

1 18. The camera system as recited in claim 17 wherein the battery system is rechargeable
2 using solar energy.

1 19. The camera system as recited in claim 10 wherein the battery system is
2 interchangeable.

1 20. The camera system as recited in claim 10 wherein the battery system and storage
2 system are combined into a single unit located in a sealed case external to the camera case.

1 21. The camera system as recited in claim 17 further comprising a light source in
2 communication with the camera system.

1 22. The camera system as recited in claim 21 wherein the light source is an inductively
2 rechargeable external strobe light in communication with the camera system via a wired link,
3 wireless link or a set of non-corrosive contacts.

1 23. A camera system designed for underwater use comprising:
2 a digital camera;
3 a sealed case surrounding the digital camera; and
4 a transmission link for outputting images from the digital camera to a remote
5 controller.

1 24. The camera system as recited in claim 23 wherein the digital camera is a video
2 camera.

1 25. The camera system as recited in claim 23 wherein the remote controller is a personal
2 computer.

1 26. The camera system as recited in claim 23 wherein the remote controller is a printer.

1 27. The camera system as recited in claim 23 wherein the transmission link is a wired link
2 or a wireless link.

1 28. A method for using a sealed digital camera system comprising:
2 activating internal camera controls with a user interface;
3 obtaining one or more images with the camera system; and
4 transmitting the one or more images to a controller with a transmission link in
5 communication with the camera system.

1 29. The method of claim 28 further comprising recharging a battery system using an
2 external power supply.

1 30. The method of claim 29 wherein the power supply is an inductive charging
2 mechanism.

1 31. The method of claim 28 further comprising recharging a storage system using an
2 external power supply, the storage system in communication with the camera system.

1 32. The method of claim 31 wherein the power supply is an inductive charging
2 mechanism.

1 33. The method of claim 28 further comprising replacing an external storage system
2 contained in a sealed case, the external storage system designed to communicate image data
3 with the camera system during use.

1 34. The method of claim 28 further comprising replacing an external battery system
2 contained in a sealed case, the external battery system designed to communicate with the
3 camera system during use.

